

HISTORIC AMERICAN ENGINEERING RECORD
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HAER
PA
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709P-

NAVAL BASE PHILADELPHIA - PHILADELPHIA NAVAL SHIPYARD,
STRUCTURAL SHOP
(Naval Base Philadelphia - Philadelphia Naval Shipyard,
Building No. 57)
League Island
Philadelphia
Philadelphia County
Pennsylvania

HAER No. PA-387-P

All photographs by Jet Lowe, HAER staff photographer, Summer 1995.

- PA-387-P-1 VIEW NORTH OF WEST GALLERY OF INSIDE MACHINE SHOP 36;
THE GALLERY HOUSED TURRET, ENGINE AND TOOLROOM
LATHES, SMALL MILLING MACHINES AND DRILL PRESSES
USED FOR MACHINING SMALL PARTS.
- PA-387-P-2 VIEW NORTH OF INSIDE MACHINE SHOP 36; SHOP FLOOR
ACCOMMODATES LATHES CAPABLE OF MACHINING A
CYLINDER 60 INCHES IN DIAMETER AND 75 FEET LONG;
OTHER EQUIPMENT INCLUDES HORIZONTAL AND VERTICAL
JIG BORERS, HYDRAULIC TUBE STRAIGHTENERS AND OTHER
EQUIPMENT FOR PRECISION MACHINING OF LARGE SHIP
COMPONENTS.
- PA-387-P-3 VIEW NORTH OF TUBE BENDING SHOP IN BOILERMAKERS
DEPARTMENT LOCATED IN SOUTHEAST CORNER OF THE
STRUCTURAL SHOP BUILDING (BUILDING No. 57). THE
COMPUTER CONTROLLED TUBE BENDER CAN BE
PROGRAMMED TO BEND BOILER TUBING TO NEARLY ANY
REQUIRED CONFIGURATION.
- PA-387-P-4 VIEW SOUTH OF SAIL LOFT - MID-LOFT AREA. NOTE
INFLATABLE BOATS UNDERGOING PRESSURE TESTING.
- PA-387-P-5 VIEW SOUTH FROM NORTHEAST CORNER OF SAIL LOFT.
- PA-387-P-6 OVERALL INTERIOR VIEW OF STRUCTURES SHOP (11 SHOP)
LOCATED ON WEST SIDE OF BUILDING 57-LOOKING NORTH;
THE SOUTH END OF THE STRUCTURES SHOP WAS DEVOTED
TO WELDING HEAVY PLATE FOUNDATIONS AND SHIP
COMPONENTS; THE FLOOR IS FABRICATED OF CAST STEEL

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AND FEATURES A GRILLWORK OF 1 ½" FABRICATED HOLES WHICH ARE USED AS SOCKETS FOR GRIPPING POSITIONING PINS.

- PA-387-P-7 VIEW SOUTHEAST OF WELDMENT ASSEMBLY FLOOR IN STRUCTURES SHOP, BUILDING 57; THE FLOOR IS FABRICATED OF CAST IRON AND FEATURES A GRILLWORK OF 1 ½" SQUARE HOLES WHICH ARE USED AS SOCKETS FOR GRIPPING POSITIONING OR LOCK DOWN PINS; A LOCK DOWN PIN IS SHOWN LEFT AND BELOW THE CENTER OF THE PHOTOGRAPH; THE VERTICAL SECTION OF THE PIN IS PLACED INTO A HOLE IN THE CAST STEEL FLOOR WHILE THE ANGLES SECTION OF THE PIN RESTS ON THE PIECE UNDER CONSTRUCTION; THE PIN IS HAMMERED INTO THE HOLE AND SPRING TENSION IN THE PIN HOLDS THE WORK PIECE IN POSITION.
- PA-387-P-8 1,500-TON PRESS NEAR WELDMENT AREA IN BUILDING 57.
- PA-387-P-9 VIEW SOUTH OF HYDRAULIC HAMMER IN BOILERMAKERS SHOP (PROBABLY THE OLDEST PIECE OF EQUIPMENT IN THE YARD, ORIGINALLY POWERED BY STEAM) NAMEPLATE: UNITED ENGINEERS AND FDRY. CO. PITTSBURGH, PA., USA DAVY BROTHERS LTD. PATENTS-AUG 1, 1905, FEB, 1901, SEPT 8, 1908-10000 LBS.
- PA-387-P-10 VIEW NORTHEAST OF ABOVE HAMMER.
- PA-387-P-11 VIEW OF HAMMER NAMEPLATE (CHAMBERSBURG ENGINEERING COMPANY, CHAMBERSBURG, PENNA USA) AND VIEW NORTH OF TONY TALOTTA (HEAVY FORGER), PAUL AZCHARKA (HAMMER OPERATOR), AND MORTY HOFFMAN (HAMMER OPERATOR HELPER) FORGING EYEBOLTS.
- PA-387-P-12 VIEW NORTHEAST OF TOOLING FOR FORGING MARINE HARDWARE IN BLACKSMITH SHOP, EAST SIDE OF BUILDING 57.
- PA-387-P-13 VIEW WEST OF SMALL TOOLING AND FORGING DIES IN

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BLACKSMITH SHOP, BOILERMAKERS DEPARTMENT, EAST SIDE
OF BUILDING 57; DURING WORLD WAR II APPROXIMATELY
FORTY WOMEN WERE EMPLOYED AS BLACKSMITHS FORGING
A VARIETY OF SMALL TOOLS; THESE MAY BE THE TOOLS
THEY USED.

*See HAER No. PA-387 for photocopies of historic images.